

Linux For Noise Cancellation For Your Ham Radio

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It's possible to have a serviceable noise cancellation setup using a computer you already have without buying something separate thanks to a little open source software.

Have Linux (Ubuntu/Lubuntu/Debian/Whatever-Distro) installed on a computer with pulseaudio (this is the default for most distros).

Run the line-out of your radio to the line-in (or mic-input if you have no separate line-in) of your computer. Having an external USB audio device can be nice for this as there will be less noise caused by the connection, but you might be able to get away with only the input and output on the soundcard built into your computer.

Add these lines to /etc/pulse/default.pa to add support for echo/noise-cancellation and a loopback so you can hear it. You'll need to be "root" (the administrator) to edit the file. You can usually sudo gedit /etc/pulse/default.pa for this.

```
load-module module-echo-cancel aec_method=webrtc source_properties=device.description=EchoCancel  
load-module module-loopback latency_msec=1
```

And then run this in the terminal to restart pulseaudio

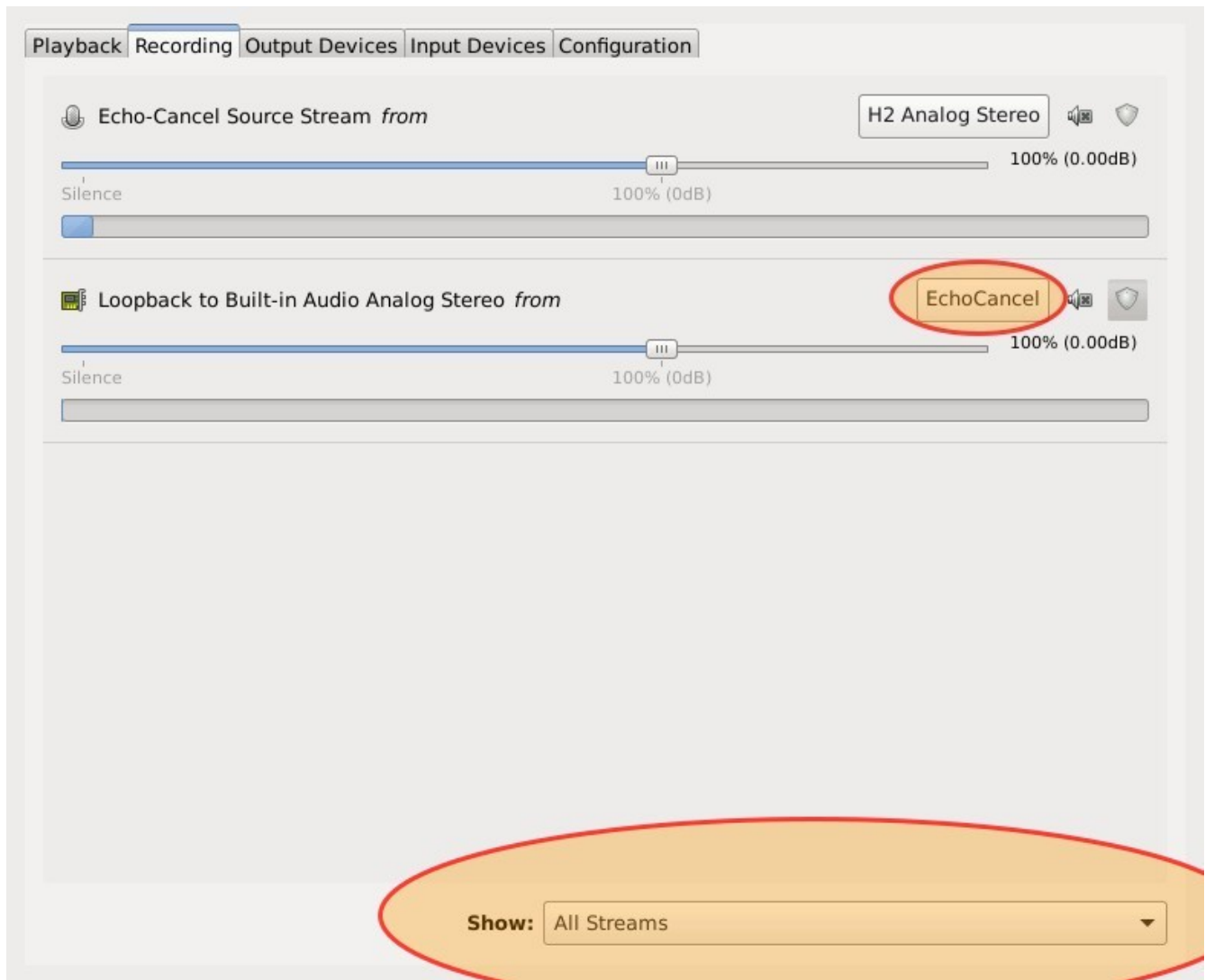
```
pulseaudio -k
```

Then open up pavucontrol either by the graphical menus or from the terminal

```
pavucontrol
```

Once in pavucontrol:

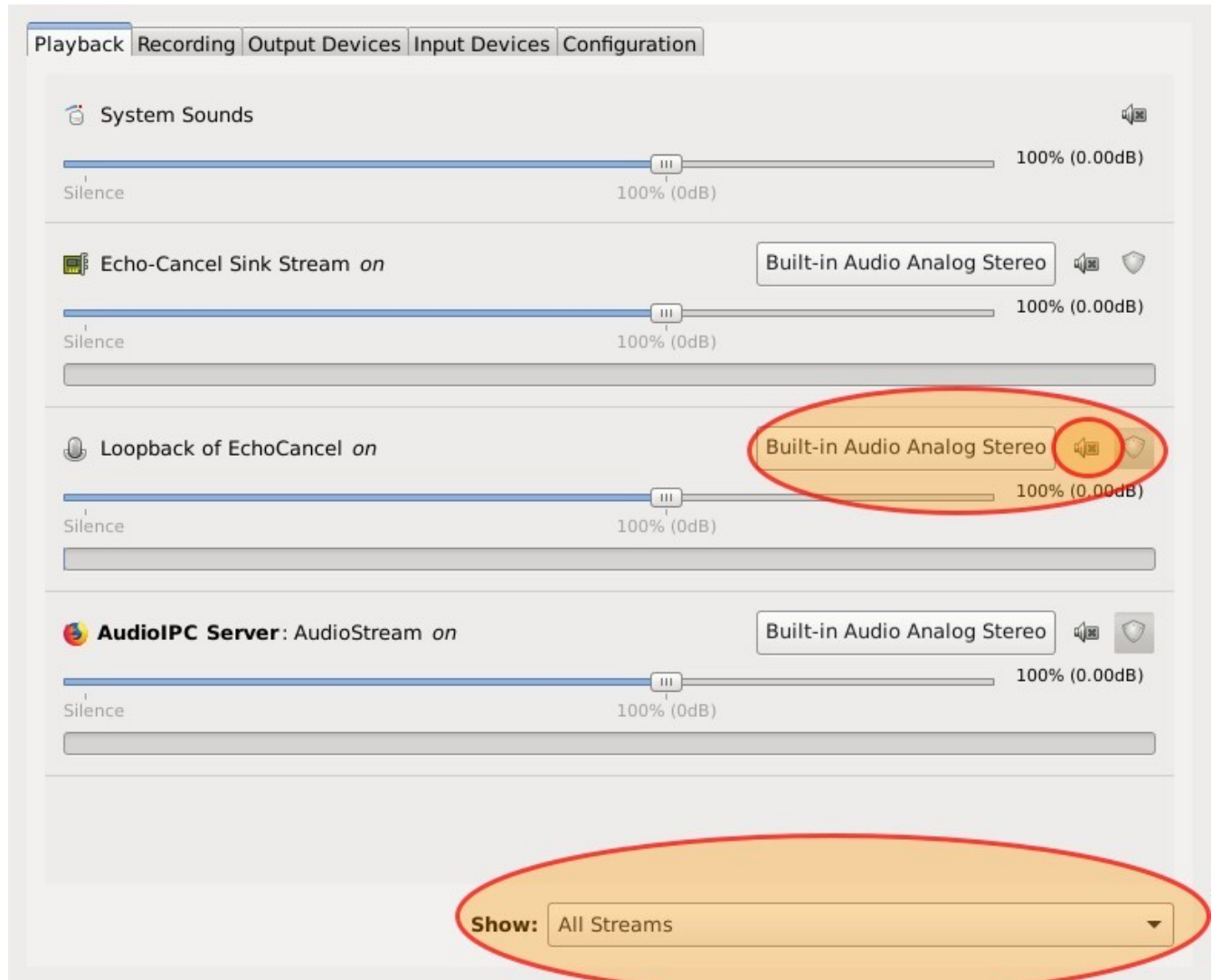
- Go to the "Recording" tab:
 - * Make sure that the dropdown menu at the bottom is set to "All streams"
 - * Set the "Loopback to Built0in Audio... from" to "EchoCancel"



Still in pavucontrol:

- Go to the Playback tab:

- * Make sure that the dropdown menu at the bottom is set to "All streams"
- * Make sure that the loopback device is set to the same place as your headphones/speakers
- * Make sure the loopback device is unmuted.



Huzzah! You should now start to hear the noise-canceled audio of your radio!

73s

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